TROGLOGLANIS[1] PATTERSONI A NEW BLIND FISH FROM SAN ANTONIO, TEXAS.[2]

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Professor J. T. Patterson, of the University of Texas, has secured a specimen of a small blind catfish from an artesian well in San Antonio, Texas, belonging to Mr. George W. Brackenridge. Pending the securing of other material the following facts may be of interest.

The specimen is without pigment. There is no external evidence of any vestige of an eye. It has a total length of 85 mm. Other and larger specimens were emitted but not preserved.

The occurrence of blind fishes in Texas was predicable. There are large springs, the outlets of underground rivers in the same region and artesian wells tap the subterranean waters in various places about San Marcos and San Antonio. The flow of the artesian well of the Bureau of Fisheries at San Marcos shows that the underground waters have an abundant cave fauna. From this well and some neighboring caves I secured twenty (20) species of invertebrates and the blind salamander *Typhlomolge* in less than a week's stay. The surprise therefore is not that cave fishes have been secured from the underground rivers, but that they have not been found before. It is more of a surprise that the fish should be a catfish rather than a member of the blind-fish family of *Amblyopsidæ,* found in Tennessee, Arkansas and northward.

However, the occurrence of blind catfishes somewhere in the Mississippi basin was also predicable. Some of the catfishes are nocturnal in habit and live in crevices, under rocks, stumps and such, and detect their food by means of touch and taste organs scattered

[1] τρωγλη, ἡ = cave; γλανις, ἡ = catfish, originally from Glanis, the name of a river.

[2] Contribution from the Zoölogical Laboratory of Indiana University, No. 167.

over their entire body and especially over their barbels. All of these facts predispose toward a cave existence, and various catfishes have become blind in different parts of the world. I have found normal-eyed catfishes in the caves of both Indiana and Kentucky. Cope secured blind catfishes, dark in color, *Gronias nigrilabris* from eastern Pennsylvania. I have recently called attention to *Typhlobagrus kronei* Ribeiro[3] from the Cavernas das Areiras, Iporanga, Sao Paulo, Brazil and more recently to *Phreatobius cisternarum* Goeldi,[4] the blind catfish living on the Island of Marajo. These belong to the Pimelodinæ, a subfamily of catfishes not found in North America.

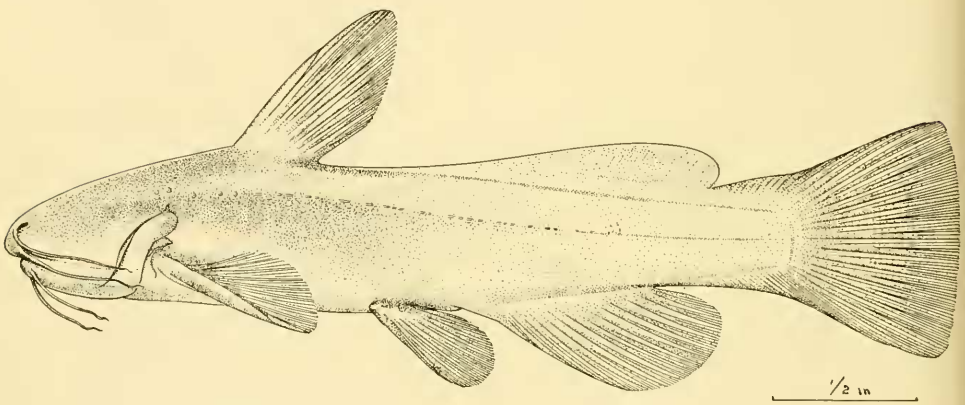

FIG. 1. *Troglogianis Pattersoni* Eigenmann. Type.

Gronias nigrilabris, from eastern Pennsylvania, is without question a derivative of the universally distributed *Ameiurus* of the eastern and central United States. *Typhlobagrus,* from southeastern Brazil, is derived from *Pimelodella,* a genus widely distributed in South America, a member of the Pimelodinæ. *Phreatobius* is more remotely related to *Heptapterus,* another but very different member of the Pimelodinæ.

The new Texan blind fish, judging by the position of its dorsal and ventral fins, as well as by its adipose fin, is derived from a fish-like *Schilbeodes,* a genus of catfishes with nearly a dozen species, generally distributed from the St. Lawrence to Texas. *Schilbeodes*

[3] *Memoirs Carnegie Museum,* VII., p. 255, Plate XXXIV., April, 1917.
[4] *L. c.,* p. 372, Plate LVI., 1918.

nocturnus has been found in the springs (mouth of the underground river) at San Marcos and at various other places in Texas and is the only species of the genus recorded from Texas. *Schilbeodes nocturnus* is, however, not closely related to the blind catfish living in the underground rivers of the same region.

I have called attention to the fact that the species living in the caves of the south are more intimately adapted to their subterranean home than those of the north. The eyes of the Texan *Typhlomolge* are more degenerate than those of the salamanders of Missouri. Judging from external appearance the eyes of the Texan *Troglo-glanis* are more degenerate than those of any of the blind fishes from farther north. The technical description of *Trogloglanis* follows:

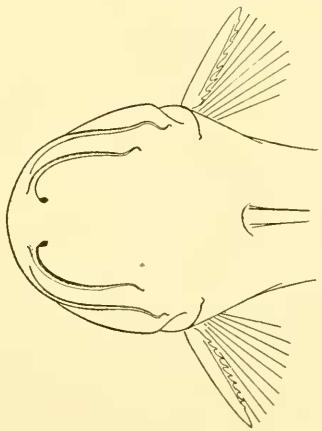

Fig. 2. Outlines of the head as seen from above.

Head similar to that of a tadpole, as broad as long; mouth inferior; teeth?; adipose fin long and low, rounded posteriorly, connected at its base with the accessory caudal rays; no external evidence of eyes; distance between origin of dorsal and tip of snout half as great as origin of dorsal from the end of the adipose; distance between snout and origin of ventrals 1⅓ in the distance between origin of ventrals and base of middle caudal rays; pectoral spine strong and pointed, about two thirds as long as the longest ray, about equal to the length of the head behind the posterior nares, smooth in

front, its posterior margin with seven straight teeth, less than half the width of the spine; caudal truncate, with numerous accessory rays; dorsal spine equal to the pectoral spine; base of adipose fin equal to the predorsal area; anal but slightly rounded, its highest ray equal to the length of the head. Nasal barbel reaching very nearly to end of opercle, maxillary barbel to the pectoral spine, mental barbels a little beyond the edge of the gill-opening.

Head 4.4 in the length; depth 6; D. I. 7; A. 14; P. I. 9; V. 8.

The specimen was collected by Mr. G. W. Brackenridge of San Antonio, Texas. Mr. Brackenridge gave the specimen to Professor Patterson who sent it to the author for determination. It is catalogued as No. 15240 Indiana University Museum.